

PRESSURE CONTACT-TYPE SEMICONDUCTOR DEVICE

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ABSTRACT

PURPOSE: To reduce the distortion applied to an element when an electrode is brought into contact with the element by pressure, by interposing a powder metallic layer with a particle diameter below 2.mu.m.

CONSTITUTION: A powder layer 7 with approximately 0.5 mm thickness is generated on the capacity bottom face of base electrode 2 and case 3. Element 1 is put on layer 7 so that electrode 13b may be at the top. Insulating ring 5 is inserted to leading-out electrode 4, and plate spring 6 is inserted. After that, the pressure over three times as large as the spring force of plate spring 6 is applied to solidify layer 7; and after the plate spring is fixed by a protrusion, a device is completed by welding and connection. In this structure, since powder layer 7 becomes a pressure buffering materials and the warp of element 1 is not reformed, element 1 is prevented from being affected by the distortion to a Si substrate and cracking. The thermal resistance and forward voltage drop are reduced.

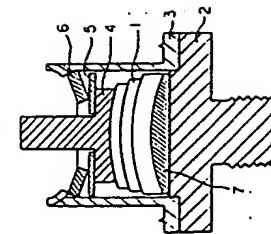
特許昭50-95103(3)
好味金属箔を介在することにより好味金属箔
が半導体電子子に対して被柵材料としての働きをもつて
半導体電子子に加わるストレッカを減少せること
ができるとともに、半導体電子子と主電極との接
触による熱抵抗および熱電圧降下を低減化するこ
とができる。本発明によれば、好味金属箔は、
半導体電子子の熱電極等に用いられる。

アヒルとヒトの一卵性卵を示す供試の一部断面面、第2
図は第1図に示す半導体電子の詳細断面図、第3
図は第1図に示す半導体電極で計られた熱流況が
アヒルとヒトの卵殻厚度下と供試金属性層との関係を
示す断面図である。

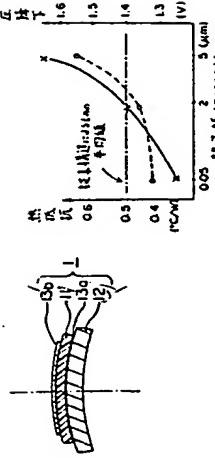
図は第 1 図に示す半導体素子の詳細断面図、第 3 図が第 1 図に示す半導体基盤上に積られた熱抵抗を示す。また図は電極部正面上と熱抵抗部の寸法を示す。

以上説明したように、本発明による加圧灌漿が半導体装置にすれば、半導体素子と電極との間の接觸部を確実に充てんする効率が高くなる。

四
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